

SWBAT

connect class activities to
inertia

Sep 4-7:31 AM

Welcome!!!

SECA CP Physics
Thursday 28 January 2016



H. Leslie Grebe
Room C-244

Centering
(music)

- Everyone is passing to start quarter - be RHR about your phone...
- Contract for 2Q?

Opening Activity - Quick Write!

Songs that pick you up - help you keep going?

Sep 7-7:04 AM

What we should have solid:

Memorize our 5 vocab cards, units, vector or not, definition, formula

Be able to answer distance vs displacement questions

Be able to make measurements of real-life motion. Know what is likely to make timing things difficult and how to get more reliable timing results

Be able to convert between miles and meters, between hours, minutes, and seconds

Be able to calculate speed = dist/time and velocity = disp/time

Know what all of the symbols in the UAM equations stand for and mean

Be able to turn a UAM word problem into a list of knowns and unknowns

Be able to pick the equation with those 4 things in it

Be able to put the knowns into that equation

(Be able to solve for the unknown)

→ PROJECTILES: V_x IS CONSTANT; V_y CHANGES; $a_y = -9.8 \text{ m/s}^2$ PG 42
PG 43 TIME, Δt , CONNECTS x & y
PG 49 VECTORS INTO x & y , ADD VECTORS
SOH - CAH - TOA

QW every day to review? Volunteer answers on board?

Dec 4-9:15 AM

Unit	Chapters	Date
Left-Side Items	Page	Right-Side Items
REFLECTION ON NOTES	2	Ed Ed Adam Savage
HOW FAR FROM BRIDGE	4	"FORT STUEBEN"
REFLECTION ON NOTES	6	Hmwk: BASIC UNITS
PR: DISTANCE & DISPLACEMENT	8	Hmwk: FP DISPLACEMENT
DIAGRAM & STEPS	10	TIMING & ERROR
SUMMARY OF TIMING	12	How to BUILD a TABLE
PR: CONVERTING SOLNS	14	Hmwk: FP CONVERSIONS
PR: VELOCITY & SPEED	16	Hmwk: FP SPEED & VELOCITY
SPEED WORD PROBLEMS	18	ALGEBRA FOR PHYSICS
LAB JOURNAL 10/7	20	LAB JOURNAL 10/8
LAB JOURNAL 10/12	24	Hmwk: FP GRAPH POSITION
26	USE FOR PROJECT	27
OBSERVATIONS OF ORF	28	FP: INTRO TO ACC.
REVIEW FOR TEST	30	BALL ON RAMP
VECTORS, DIRECTION	32	FP: BASIC ACC EXAMPLE
PRACTICE UAM	34	FP: INTRO TO UAM
FALLING OBJECTS PACKET	36	FP: INTRO TO FREEFALL
MY FREE FALL WORD PROBLEM	38	3-ACT FALLING GLOWSTICK
Toy popper experiment	40	Free fall class solutions
Launched vs. Dropped	42	FP: INTRO TO PROJECTILE MOTION
PROJECTILE SIMULATOR	44	FP: PROJ. MOTION PROBLEM
PROJ'L PRACTICE PROB	46	PROJECTILES PRACTICE
OUR VECTOR PRACTICE	48	FP - INTRO TO VECTOR COMPONENTS
VECTOR PACKET	50	NOTES ON ADDING VECTORS
MEASURE LAUNCHER	52	NOTES ON FINDING v_x & θ
OBSERVATIONS OF OBJECTS	54	RULES OF PHYSICS NOTES

Sep 5-9:09 AM

Pg 55-57 - Rules of Physics notes

Hmwk - Due Fri 1/29

Youtube: Eureka!

Eureka 1 - Inertia

Episodes - Physics

Eureka 2 - Mass **What vocab cards???**

Eureka 3 - Speed

Eureka 4 - Acceleration 1

Eureka 5 - Acceleration 2

Jan 26-8:23 AM

Rules of Physics

EUREKA #1 - INERTIA
(SKIPPED THE INTRO)

- **PHYSICS IS ABOUT MOVEMENT: HOW & WHY**
- THINGS LIKE TO STAY WHERE THEY ARE
GUY COULDN'T MOVE BIGGEST ROCK,
BARELY MOVED BIG ROCK, COULD MOVE SMALLEST
- **NOTHING MOVES WITHOUT FORCE TO PUSH OR PULL**
- ONCE SOMETHING IS MOVING IT WILL KEEP GOING UNLESS THERE'S A FORCE TO STOP IT
 - AIR RESISTANCE
 - TREE
 - ROUGHNESS OF GROUND
- ! IF YOU KICKED ROCK IN OUTER SPACE IT WOULD KEEP MOVING FOREVER
- IT TAKES JUST AS MUCH EFFORT TO STOP MOVING AS TO START
- THINGS LIKE TO KEEP DOING WHAT THEY ARE ALREADY DOING

LAZINESS = INERTIA

Jan 26-10:00 AM

Pg 54: Observations of objects

Pennies - FLAT PART OF FINGER
 - PENNY NEAR EDGE
 - 3 PENNIES EASIER?
 - INDEX CARD TO GET OUT
 ↳ LAZY

Dishes & TABLECLOTH
 - PULL DOWN
 ↳ LAZY
 - QUICK!
 - HEAVY THINGS
 - NO HEM, SMOOTH

PENNIES & DISHES KEPT SITTING THERE

Beiber IN HIS CAR:
 STARTED AT REST
 THEN MOVING
 CAR STOPPED
 BEIBER KEPT GOING

BEIBER KEPT MOVING

NEWTON'S 1ST LAW OF MOTION:
 • OBJECTS AT REST TEND TO STAY AT REST &
 OBJECTS IN MOTION TEND TO STAY IN MOTION
 UNLESS ACTED UPON BY AN OUTSIDE
 FORCE.
 ↳ THE LAW OF INERTIA

Jan 26-9:40 AM

VOCABULARY CARDS:

Front:

- Word (large, spelled correctly)
- Image
- Link word ***

*** Wait until you understand the term before deciding on a link word and sentence

Back:

- Definition in words you understand
- Units - Vector or not?
- Sentence showing word's meaning ***

FRONT:

INERTIA
 < IN-UR-SHA >

BACK:

DEFN: THE NAME FOR OBJECTS
 TENDING TO RESIST CHANGES
 TO THEIR MOTION (STILLNESS)

Oct 20-9:26 AM